

# DESIGN FOR NEW MEDIA

INTERACTION  
DESIGN  
FOR  
MULTIMEDIA  
AND THE WEB

LON BARFIELD



PEARSON  
Addison  
Wesley

# Contents

<b>Preface</b>	<b>xiii</b>
The 'big picture'	xiii
Goals, audience and scope of the book	xiv
The accompanying web site	xxi
Terminology	xxii
Acknowledgments	xxiii

<b>1 New media and interaction design</b>	<b>3</b>
New media, new design	3
New media	6
Interaction design	8
The past: where did new media design come from?	16
The present: the current scope	17
The future: education	19
Exercises	20
<b>2 Design and technology</b>	<b>21</b>
Conventional media	21
Shifting to the internet	23
The paradigm shift	26
Design and technology	27
A design vocabulary	28
Exercises	34

Media and the five senses	37
<b>3 Text</b>	<b>41</b>
Introduction	41
Scannable text	46
Writing consistent text	48
Text length	52
Links and meta-information	55
Other meta-information	59
Text and interaction	63
Different (English) languages	65
Writing for changing content	67
Exercises	68
<b>4 Layout</b>	<b>71</b>
Introduction	71
Plain text	72
Text with properties	74
Listing and grouping	75
Link layout	79
Layout for structure	81
Screen positioning	82
Graphic material	85
Designing layout for change	86
Exercises	89
<b>5 Icons</b>	<b>90</b>
Introduction	90
Advantages of icons	92
Disadvantages of icons	93
Designing single icons	94
Designing icon sets	98
Icons or text?	100
Case study: pass the icon	101
Exercises	102
<b>6 Sound</b>	<b>104</b>
Introduction	104
Sound versus graphics	104

Sound in the real-world	107
Sound technology	110
Sound design	111
Using speech in new media	115
Sound and speech as primary interaction	117
Conclusions	119
Exercises	119
 <b>7 Color</b>	 <b>121</b>
Introduction	121
Light	121
Perception of light	123
Color effects	126
Text and color	130
Color associations	131
Color in design	134
Exercises	137
 <b>8 Video and animation</b>	 <b>139</b>
Introduction – movement and users	139
Video	140
Animation	149
Exercises	154
 <b>9 Goals, audience and scope (GAS)</b>	 <b>161</b>
Introduction	161
Goals	161
Audience	164
Scope	166
Exercises	168
 <b>10 Contexts</b>	 <b>169</b>
Introduction	169
The physical context	170
The user's context	174
Other contexts	177
Exercises	178

<b>11</b>	<b>User models</b>	<b>180</b>
	Introduction	180
	User models	183
	When it goes wrong	188
	When it goes right	192
	Exercises	193
<b>12</b>	<b>Feedback</b>	<b>194</b>
	Four-week feedback	194
	Feedback and user models	195
	Feedback in new media	196
	Designing feedback	197
	Problems with feedback	200
	Trust	202
	Exercises	202
<b>13</b>	<b>Structure</b>	<b>204</b>
	Structure and navigation	204
	Standard structures	205
	Which structure to use?	210
	Other structural issues	213
	Structure and content, which comes first?	214
	Exercises	218
<b>14</b>	<b>Navigation</b>	<b>221</b>
	Introduction	221
	What is navigation?	225
	How do we navigate?	227
	Designing to support navigation	228
	Navigation in new media	232
	Supporting navigation in new media	236
	Links	239
	Conclusions	241
	Exercises	241
<b>15</b>	<b>Narrative</b>	<b>243</b>
	Introduction	243
	What is narrative?	244
	Narrative in new media	245

Who is in control?	247
Continuity	250
Start to finish	252
Exercises	255
<b>16 Generating ideas</b>	<b>261</b>
Introduction: the Daleks	261
Doing inspiration	261
Where do ideas come from?	262
Supporting idea creation	264
Groups	266
Recording sessions	268
Exercises	269
<b>17 Top-down design</b>	<b>270</b>
Introduction	270
Areas of application	271
Advantages	272
Doing top-down design	275
Drawbacks of top-down design	277
Exercises	279
<b>18 The underlying system model</b>	<b>281</b>
Introduction	281
The underlying system model in detail	283
Building the underlying system model up	287
Some examples	289
Designing it	293
Exercises	299
<b>19 Metaphors</b>	<b>302</b>
Introduction	302
More examples	304
What sorts of metaphors are there?	305
Choosing a metaphor	307
Words of caution	308
Exercises	310

<b>20</b>	<b>Interaction specifications</b>	<b>311</b>
	Introduction	311
	Specifications and prototypes	311
	But why bother?	313
	Drawing up specifications	316
	The user interface specification is usually . . .	317
	The medium of the specification	320
	Specification and prototyping	321
	Exercises	322
<b>21</b>	<b>Prototypes and demos</b>	<b>323</b>
	Introduction: a <i>Star Wars</i> prototype	323
	Historical background	325
	Prototypes in new media	327
	Building a prototype	327
	Different types of prototypes	329
	Making demos work well	331
	Presenting a demo of a prototype	333
	Advantages of prototypes	335
	Low-fi prototypes	337
	'Never play a note you don't believe in'	338
	Further reading	338
	 Index	 339